AGNES MARY CLERKE AND ELLEN MARY CLERKE

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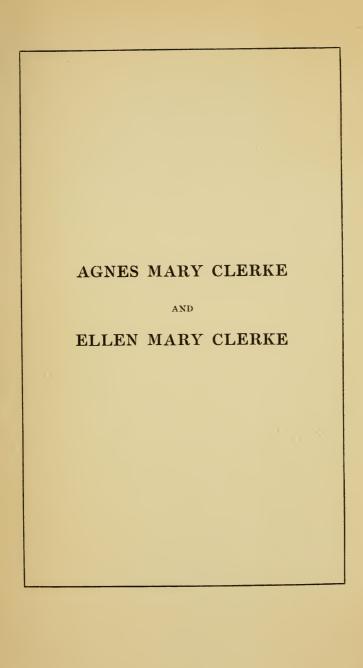


PRESENTED BY Sady Huggins.

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. . . "above these heavens, which here we see, Be others farre exceeding these in light." E. SPENSER. [An Hymne of Heavenly Beautie.]





AGNES MARY CLERKE.

AND

ELLEN MARY CLERKE

AN APPRECIATION

BY

LADY HUGGINS

HON. MEM. R.A.S.

PRINTED FOR PRIVATE CIRCULATION
1907

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FOREWORD

Lady Huggins in her original draft of the obituary notice of my sister Agnes, which appeared in the Astrophysical Journal, included some words of personal appreciation and of reference to her family which were omitted from the copy sent for publication, as being, possibly, somewhat beyond the scope of a purely scientific journal. At my request Lady Huggins has con-

sented to the full original draft, with a few additions, being published for private circulation. She has also, to my great gratification, and entirely on her own initiative, taken this opportunity of adding an appreciation of my elder sister.

My sisters' acquaintance with Lady Huggins commenced only after they had been some time permanently resident in London; and for the accuracy of the statements relating to their earlier lives I am alone responsible. Their father had died before the period

of which Lady Huggins speaks from personal knowledge; and perhaps it is fit that I should supplement what she says as to the influence of family life upon the characters and careers of my sisters by mentioning a few facts connected with my father. Although a classical scholar of Trinity College, Dublin, his interests were for the most part scientific. In our earliest years his recreation was chemistry, the consequential odours of which used to excite the wrath of our Irish servants. Later a "big telescope" (4 inch aperture)

was mounted in the garden, and we children were occasionally treated to a glimpse of Saturn's rings, or Jupiter's satellites. In an age before railways and telegraphs had reached the remote parts of Ireland and before clocks were "synchronised with Greenwich," the local time would have gone "all agley" had it not been for my father's observations with his "orthochronograph." These trivial things show that it was in an environment of scientific suggestion that our early lives were passed; and to me, at all events, my

father's influence was more than suggestion, for to his painstaking teaching I have to attribute any little successes which I subsequently achieved.

It is difficult for me to express to Lady Huggins my thanks in fitting terms, for to thank implies a service; and her work has been not a service to me, but a labour of love for those whose simple lives she records. Still I may say that I am deeply gratified by this finished product of her pen, and that I rejoice that she should have con-

ceived the idea of writing this Appreciation, thereby enabling me to place it before the eyes of many friends.

I have to thank Director Frost of the Yerkes Observatory for his permission to reprint that part of the "Appreciation" which has already appeared.

AUBREY ST. JOHN CLERKE.

68 REDCLIFFE SQUARE, S.W.

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MRS. CLERKE.
From a bust executed in Rome in 1868.

AGNES MARY CLERKE was born on February 10, 1842, at Skibbereen, a small country town in a remote part of the County Cork. Her father was John William Clerke; and her mother was a sister of the late Lord Justice Deasy.

Constitutionally delicate, Agnes Clerke from her earliest years, as so often is to be noticed in cases

of frail health, found her chief delight in literary study and in music. From quiet talks often enjoyed with her in her later life, it was clear that the thoughtfulness of Agnes Clerke, and her liking for probing difficult problems, must have developed early.

This is not the place for enlarging upon the family influences of her home life, but it should be said that these were truly fostering, and that she was a devoted and loving daughter, to whom the parental sympathy, strongly given

on both sides, was at once inspiration and joy. Mrs. Clerke was a remarkable woman, with rare powers of insight and of capacity for love. Her conversational powers were of a high order, as was her musical ability. Those privileged to be present at her afternoon gatherings will not easily forget their pleasures; and intimate friends will long remember the charms of her music. Her rendering of old Irish airs on Ireland's national instrument—the harp—was delightful; and so indeed was her piano-playing. She told me

one day near the close of her life, when near her eightieth birthday, that she practised on her instruments every day. This was interesting; and showed that power of persevering work—even under the natural disabilities of age—which was a marked feature in her daughter Agnes.

The bust, a photograph of which is here reproduced, was executed in Rome when Mrs. Clerke was about fifty years of age.

In considering the fostering influences of Agnes Clerke's home life, that of her only brother, Aubrey St. John Clerke, should be mentioned.

Mr. Clerke won the first gold medal of Trinity College, Dublin, in Mathematics at his Degree examination in 1865, and was awarded a studentship of £100 a year for seven years—the highest honour obtainable at the Degree examination. He also won the second gold medal conferred by the University for Experimental and Natural Science.

Mr. Clerke has told me-what indeed I always believed - that

although not professing to be a mathematician, his sister's perception of mathematical truth was singularly clear; and I feel sure that her brother's mathematical powers and knowledge of Natural Science were a great advantage to her, for the helpfulness of thorough sympathy is very great. In her later life she took lessons in mathematics, and expatiated to me on the pleasure she felt in them. Not that she aimed at making herself a mathematician; she was too wise to so err. Her object was simply

to go far enough to enable her to do better her own particular work. No one that I have known—man or woman-better understood that the half may be better than the whole; that the art of doing, consists, greatly, in—not doing. She could renounce. And in these days great renunciation is necessary if useful work is to be done.

In 1861 the Clerke family moved to Dublin, and in 1863 to Queenstown. The winters of 1867 and of 1868 were spent at Rome; those of 1871 and 1872 at Naples; and the

next four winters at Florence—the summers of 1874-76 being passed at the Bagni di Lucca. Both sisters profited to the full from this sojourn in Italy, as their subsequent writings show; but Agnes at Florence worked specially hard, reading constantly in the Public Library there, and always, I believe, with one great object before her.

It is a question of much interest to examine into the early leanings and aspirations of those who distinguish themselves later, and Agnes Clerke early determined her life

Before leaving Skibbereen, work. about the age of fifteen, she had clearly before her the intention of writing a history of Astronomy, and it is thought, had actually written a few chapters. Her first article accepted for the Edinburgh Review, is in harmony with the above facts.

Agnes Clerke's first wish to examine into Science generally, was roused by the perusal of Joyce's Scientific Dialogues; but as regards Astronomy, Sir John Herschel's Outlines was her earliest guide-

and I can imagine how much this really great book was to her, from my own early use of it.

Well do I remember reading an article in the *Edinburgh Review* for October 1880, on "The Chemistry of the Stars." I admired it much: I wondered who had written it, for it seemed to me to be unlike the work of any one then known in the scientific world. Five years later I solved my puzzle, for in 1885 appeared the *History of Astronomy in the Nineteenth Century*; and I

had not looked far into it before I exclaimed: "Now I know who wrote that article in the *Edinburgh Review*!"

Shortly after—dining at a house where to dine was always to share in a feast of reason and flow of soul—and sitting between our distinguished and kindly host Sir William Bowman, and Sir Robert Ball, Sir Robert and I exchanged ideas about the new *History of Astronomy*, and about its author, the new "Unknown." With all his own acuteness, Sir Robert

showed that the writer could not be a practical astronomer. But I was delighted to find that my admiration for the *History* was fully shared by him, and that his praise of it was very warm.

Shortly afterwards I entered upon a friendship, and upon a companionship in Astronomy, which have been among my best pleasures.

Agnes Clerke's literary life may be said to have begun in 1877 with the acceptance of her article "Copernicus in Italy," by Henry

Reeve, then editor of the *Edin-burgh Review*, who recognised the value of his new contributor and kept her at work. The number of her contributions to the *Edinburgh* is fifty; and they are all of a high order.

Agnes Clerke, with her family, returned to England in 1877, and settled in London. With the publication of the *History of Astronomy* in 1885 may be said to have begun her astronomical life.

She read systematically, and cultivated personal relations with a wide

circle of astronomical workers, in person, or by correspondence. I consider that these relations had much to do with the success of her work. Her sympathies were so keen, her interest so warm, her longing for further truth so intense,—that every one liked to offer her all they could!

In 1890 appeared her second book,

The System of the Stars.

The *Observatory* for December 1890 contains an article by me on this work. A review, in the strict sense of the term, it was not, because

there was much in the book which, for obvious reasons, I could not discuss without becoming controversial. But upon one important question I spoke strongly; and I venture now to recall and re-urge the position I then tried to expound. Briefly it is this. The progress of Science and the growth of its literature during the last quarter of a century has been so enormous, that a new order of worker is imperatively called for; and I hailed in Agnes Clerke an admirable example of such a worker, devoting herself

to Astronomy, which is at once the oldest and, in its new developments, the youngest of the Sciences—the science which Poincaré has lately so eloquently declared has given the conception of *law* to all the others.

I ventured to sketch what should be the qualifications and aims of such workers; and the years which have gone by since 1890 have but deepened my conviction that there is a splendid and ever-growing field—even now white unto harvest—ready for these special workers.

Their mission is to collect, collate, correlate, and digest the mass of observations and papers—to chronicle, in short, on one hand; and on the other, to discuss and suggest, and to expound: that is, to prepare material for experts, and at the same time to inform and interest the general public. There is urgent need of better educated public opinion in this country.

That such a mission may be a splendid and fruitful one has been shown by Agnes Clerke; what careful preparation it requires, and how

much it demands of those who would enter upon it, her career also shows.

The immense increase in astronomical literature is hardly realised except by those engaged in dealing with it. To give but one instance—"The Annual Index of Astronomical Literature for 1905," published under the auspices of the Astronomische Gesellschaft, contains over two thousand references, collated from three hundred separate publications.

The strain of such work as I am indicating is great indeed, involving,

as it should, the power of holding loose in the mind, so to speak, an immense mass of facts, and also a power of rapidly associating or dissociating them as work and discovery may suggest.

In one of her latest works, *Modern Cosmogonies*, Agnes Clerke herself dwelt upon this strain. "Year by year," she says (p. 160), "details accumulate, and the strain of keeping them under mental command becomes heavier."

Pathetic words! written—almost in blood! For not long before had

been published her last large work, Problems in Astrophysics; a work she feared she could not live to complete—a work which at times she was only able to toil at for half-hour periods.

All through her life Agnes Clerke was a student. Lectures and Friday Evening Discourses at the Royal Institution which bore upon her work she was careful to attend. A three months' visit to Sir David and Lady Gill at the Cape in 1888 gave her some Observatory

opportunities which increased her power of clearly realising the records of observatory and laboratory work. Sir George Baden - Powell invited her to accompany his yachting party to Novaya Zemlya for the solar eclipse of August 1896. When I expressed very strongly my regret that she had declined this invitation (chiefly I now know because she feared she might be prevented from keeping literary engagements absolutely to time), she surprised me a week later with an earnest request that she and I

should form a little expedition of two, and try what we could see. She had divined an unspoken longing of mine, and I cannot refrain from recording the unselfish love that would fain have gratified me. But it could not be.

She was awarded in 1892 the Actonian Prize of one hundred guineas for her works on Astronomy, by the Royal Institution; and in 1901 was commissioned by the Managers to write the first Essay under the Hodgkins Trust, on Low Temperature Research at the Royal

Institution by Professor Sir James Dewar from 1893-1900.

In 1903 she received the distinction of being elected an Hon.

Member of the Royal Astronomical Society—an honour and title held previously only by Mrs. Somerville, Caroline Herschel, and Ann Sheepshanks. I may perhaps be permitted to say that my own deep gratification in my share of this great honour conferred on us by the Society was heightened by receiving it with Agnes Clerke.

She was a frequent attendant at

Astronomical Society and the British Astronomical Association, and always an interested one. Occasionally she spoke; but she had no liking for speaking in public, nor indeed was she well suited for it.

A complete list of Agnes Clerke's papers it would be difficult to compile. They were, in truth, innumerable. Her articles on astronomers for the *Dictionary of National Biography*—out of the sixty-six volumes which constitute this great

work there are only eleven to which she did not contribute,—articles for the *Encyclopædia Britannica*, and for other encyclopædias were many, and all of them were models of painstaking inquiry and of clear, concise statement. The more important of these, that on Laplace in the *Encyclopædia Britannica*, for instance, are of lasting interest and value.

Her larger works are:—

History of Astronomy in the

Nineteenth Century (4 editions).

The System of the Stars.

Familiar Studies in Homer.

The Herschels and Modern Astronomy.

Concise History of Astronomy.

Modern Cosmogonies.

Problems in Astrophysics.

I venture to think that the History of Astronomy in the Nine-teenth Century is the most important of her works. It is admirable in its completeness of references, its wide inclusiveness, and in its lucidity. It deserves to live, and it assuredly will live—the invaluable continuation of Grant's fine work. The System of

the Stars and the Problems in Astrophysics are works of a different order. Treasuries of knowledge and of suggestion they certainly are.

The *Homeric Studies*, except in one chapter, are not specially astronomical; but they are evidence of width of culture and of wide intellectual interest, and are full of delightful touches of wit and of humour.

The Herschels is excellent and agreeable biographical reading. Three lives are vividly set forth in little more than two hundred octavo pages.

It seems to me a mistake to regard Agnes Clerke's smaller works as of less importance than her larger ones.

I have said that I consider the *History* her greatest work. But, in some respects, I venture to think that her greatest achievement is *Modern Cosmogonies*. I claim for this book that it is not only a history, but a work of philosophical thinking and of imaginative insight of a very high order.

Its small size is an accident. It is a work essentially great. In these superbly brilliant sketches Agnes

Clerke's style is at its best. Usually, it suffers from effort; the lucidity may be laboured, and the perpetual antithesis may sometimes be wearying. I have spoken of her laboriousness in study and in work, and can adorn the tale by relating what was surely a very remarkable performance. She had at the time no knowledge of Portuguese, but as part of her preparation for an article in the Edinburgh Review "Don Sebastian and his Personators," in six weeks she not only acquired considerable knowledge of the language, but read the whole of the *Lusiad* in the original!

Le Style, c'est l'homme; is it surprising that the physical efforts she made I fear only too often, tended to render her writing laboured at times?

But the writing in Modern Cosmogonies, good as it is, is a small matter compared with the masterly grasp of, I may say, all things, and of their inter-relations, which the work reveals. And where else is shown in recent philosophical writing such vision and faculty divine for

seizing and pointing out the reasonable spiritual clues, set in what we call Nature,—clues helping to sustainment of soul in the midst of the majestic mysteries surrounding us?

No sketch of Agnes Clerke would be complete without reference to her love of music. To her music was in the highest sense of the term a recreation. She turned to it for very life. Her piano-playing was truly musicianly, and her repertory was large. Perhaps on the whole, her playing was at its best in render-

ing Chopin. As an accompanist she excelled. Her teachers were,—in Dublin, Miss Flynn; in Florence, Buonamici.

I record here the complete story of her introduction to Liszt. One moonlight night in the spring of either 1868 or 1869, Mrs. Clerke and her daughters rambling about Rome were fascinated by such piano-playing as they had never before heard, and they stopped outside the open window of the villa and listened spellbound until the unknown Maestro had finished and

came to the window to look out upon the night. Then the enthusiasm of the hearers overcame conventionality, and they gave free expression to their admiration; and the fifth act of the little drama was that Liszt invited his listeners to enter, promising to play again on condition that Agnes first played for him, which I believe she did.

Remarkable as were the intellectual powers of Agnes Clerke, her moral endowments were equally so. It was a question we frequently debated—the influence of character on

work; and as I write the memory of certain talks is hauntingly present. As is the heart, is the work. The best work is and must be associated with lofty character. It was so with Agnes Clerke. No purer, loftier, and yet sweetly unselfish and human soul has lived. She was so incapable of meanness that she even incurred danger as a historian in crediting too readily all workers with her own high ideals.

As a friend and companion she was faithful and true, and full of charm; and without her the world

to those who had her friendship seems darkened and empty.

But her mission, I must believe, was accomplished. For twenty years she had been to modern Astronomy an admirable historian, and had kept before working astronomers clear charts, so to speak, of what was being done, and of what should and might be done. In so doing she rendered splendid service, and inaugurated a kind of work which must be more and more needed—a kind of work which not only advances Astronomy, but promotes a universal

brotherhood and co-operation, golden indeed.

Agnes Clerke's death comes as a shock to many. A cold—I fear not sufficiently nursed at first—led to pneumonia and complications, and in spite of all that devoted love and skill could do, she passed gently to the next life, peaceful and fully conscious almost to the last, on the morning of January 20, 1907.

Note.—The portrait is from a photograph taken by Mendelssohn in 1895.

"EDINBURGH" ARTICLES

List of Papers contributed to Edinburgh Review by Agnes Mary Clerke

- 1. April 1877. Brigandage in Sicily.
- 2. July ,, Copernicus in Italy.
- 3. Jan. 1878. Harvey and Cesalpino.
- 4. July ,, Origin and Wanderings of the Gypsies.
- 5. Jan. 1879. Campanella and Modern Italian Thought.
- 6. Oct. ,, Spedding's Life of Bacon.
- 7. July 1880. The English Precursors of Newton.
- 8. Oct. " The Chemistry of the Stars.
- 9. Oct. 1881. Albania and Scanderbeg.
- 10. July 1882. Don Sebastian and his Personators.
- 11. April 1883. Volcanoes and Volcanic Action.
- 12. Oct. 1883. Prowe's Life of Copernicus.
- 13. July 1884. The Future of the Congo.
- 14. Oct. , Mountain Observatories.
- 15. Oct. 1885. The Faith of Iran, Lady Marian.
- 16. July 1886. Alford on Art Needlework.
- 17. Oct. ,, The Aurora Borealis.
- 17a. Jan. 1887. The House of Douglas.
- 18. July ,, The Life and Works of Giordano Bruno.
- 19. Jan. 1888. Sidereal Photography.
- 20. Oct. ,, The Law of Storms.
- 21. Oct. 1889. East Africa.
- 22. July 1890. Life and Works of Lavoisier.

- 23. April 1891. Scandinavian Antiquities.24. Oct. ,, A Moorland Parish.
- 25. April 1892. The Ice Age in North America.
- 26. July ,, The Discovery of America.
- 27. April 1893. Proctor's Old and New Astronomy.
- 28. Oct. ,, Sir H. Howarth on the Great Flood.
- 29. Jan. 1894. Among the Hairy Ainus.
- 30. April ,, The Liquefaction of Gases.
- 31. Oct. ,, The Letters of Edward FitzGerald.
- 32. July 1895. Problems of the Far East.
- 33. Oct. ,, Argon and Helium.
- 34. Oct. 1896. New Views about Mars.
- 35. July 1897. Two Recent Astronomers.
- 36. April 1898. Recent Solar Eclipses.
- 37. Oct. ,, Ethereal Telegraphy.
- 38. April 1899. The Origin of Diamonds.
- 39. Oct. ,, The November Meteors.
- 40. April 1900. The Evolution of the Stars.
- 41. Oct. " Hermann von Helmholtz.
- 42. July 1901. Temporary Stars.
- 43. July 1902. The last Voyage of Ulysses.
- 44. Jan. 1903. Double Stars.
- 45. Oct. ,, The Revelations of Radium.
- 46. Jan. 1904. Fahie's Life of Galileo.
- 47. July ,, Life in the Universe.
- 48. April 1905. Earthquakes and the New Seismology.
- 49. July 1906. A Representative Philosopher.
- 50. Jan. 1907. The Old and the New Alchemy.





ELLEN MARY CLERKE.

C. Skillman.

ELLEN MARY CLERKE

ELLEN MARY CLERKE, the only sister of Agnes Clerke, whose interest in Astronomy was also keen, was born at Skibbereen on September 26, 1840. She shared her sister's life, and her devotion to her contributed not a little to the perfect fulfilment of its mission.

Acutely sensitive to the beautiful, and with a rare capacity for enthusi-

asms, Ellen Clerke was first of all a poet. But she was much besides. She was an accomplished linguist; and the years she spent in Italy were devoted to such study of Italian literature as enabled her later to do excellent original work in connection with it. An admirable article by her in the Dublin Review for October 1879, on "The Age of Dante in the Florentine Chronicles," well deserves remembrance, so full is it of the illumination of wide reading and of careful thinking. Alas! only too many articles by her have passed

Her interest in geographical science was not generally known; but she

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was a valued member of the Manchester Geographical Society, and contributed to its Journal.

As regards Astronomy, she has left useful evidence of her warm interest in the subject in two excellent popular monographs, and in various articles.

A list of Ellen Clerke's works is given at the end of this sketch, but special mention must be made of her work as a journalist. Her friends might regret—as I did for one—that so much of her time was thus spent; but, after all, journalism is

what the journalist makes it; and it cannot be denied that it is a great and increasing power in our midst.

Assuredly Ellen Clerke always used her opportunities as a journalist for noble ends. For the last twenty years of her life she wrote a weekly leader for the *Tablet*,—usually on subjects connected with the Church abroad; and on several occasions during the temporary absence of the Editor she filled his place at his request.

Many of her literary articles contributed to various periodicals were

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critical, and that she was a generous and encouraging as well as a capable critic the following facts pleasingly illustrate.

In the Westminster Review for October 1878 she had an article on "The later Novels of Berthold Auerbach." It met the eye of the novelist, and he directed to be sent to her a copy of his Landolin von Reutershöfen, inscribed: "To the Author of the article in the Westminster Review, October 1878, with kind regards of Berthold Auerbach. Berlin, Nov. 14, 1878."

It is singular that the poems of Ellen Clerke, published in 1881, should not have attracted more attention. The volume is now, I believe, almost, if not entirely, out of print; and partly on this account, partly because of its subject and of its beauty, I give here one of the poems.

NIGHT'S SOLILOQUY

Who calls me dark? for do I not display
Wonders that else man's eye would never
see?

Waste in the blank and blinding glare of Day, The heavens bud forth their glories but to me.

Is it not mine to pile their crystal cup,
Drain'd by the thirsty sun and void by day,

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Brimful of living gems, profuse heap'd up,

The bounteous largesse of my royal way?

Mine to call o'er at dusk the roll of heav'n,
Array its glittering files in order due?
To beckon forth the lurking star of Even,
And bid the constellations start to view?

The wandering planets to their paths recall,
And summon to the muster tenant spheres,
Till thronging to my standard one and all,
They crowd the zenith in unfathom'd tiers?

Do I not lure stray sunbeams from the day,

To hurl them broadcast as wing'd meteors

forth?

Strew sheaves of fiery arrows on my way,

And blazon my dark spaces in the north?

Is not a crown of lightnings mine to wear,
When polar flames suffuse my skies with
splendour?

And mine the homage with the sun to share,

His vagrant vassals rush through space to

render?

In plasmic light do I not bid her trace
Germs from creation's dawn maturing slow?
And in each filmy chaos drown'd in space
See suns and systems yet in embryo?

Miss Clerke specially enjoyed romantic subjects; and the sea and shipping appealed to her strongly. Her ballad on *The Flying Dutchman* legend is one of the finest treatments of the subject I have met with, and it is to be regretted that it is not better known, for it would lend itself well both to the reciter and to the musician.

The volume of poems gave evidence of a special gift which in later years the author cultivated with great success,—that of verse translation. Her delightful and valuable book, Fable and Song in Italy, is illustrated throughout with her own versions; and although I do not pretend to have compared each version with its original, I venture to say that the translations are, as a whole, wonderfully faithful, and that when the number of them, and the variety of subjects and of measures, are considered, the verse part alone

of the work is a notable achievement. The prose part is more than a mere setting; it is full of touches of illuminating thought, and many little-known facts are brought together suggestively, while many of the descriptive passages are wonderfully vivid. In Dr. Garnett's History of Italian Literature the English versions selected by him from Boiardo and some other poets were by Ellen Clerke.

Ellen Clerke's literary style was lighter and more spontaneous than her sister's.

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Like her sister she was highly musical, and her instrument was the guitar. A pupil of Madame Pratten, she had through the practice of many years acquired a mastery of the instrument unusual in an amateur. managing it with great skill, and arranging for it many an accompaniment. To the last almost, her singing to the guitar was full of charm; and in earlier years when the sisters sang together to her guitar accompaniment the performance was delightful.

A devoted and exemplary Catholic,

Ellen Clerke was untiring in her zeal for all good works. Unselfish and loving, she was a devoted daughter, sister, and friend. Fonder of society than her sister, it was perhaps natural that she did not pursue literary work in the same persistent way. And it fell in with her sociability that she pulled a good oar and enjoyed riding.

These sisters were lovely and pleasant in their lives, and in death they were but little divided. Ellen Clerke died after a short illness on March 2, 1906.

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A LIST OF THE WORKS OF ELLEN CLERKE

Poems: The Flying Dutchman and Other Poems. (1881.)

Versified translations of Italian poetry in Dr. Garnett's *History* of Italian Literature. (1898.)

Fable and Song in Italy. (1899.)

Flowers of Fire: a novel which gives an admirable account of the phenomena of an eruption of Vesuvius. (1902.)

An immense number of magazine articles, including a weekly

leader contributed for twenty years to the *Tablet*.

Monograph on Jupiter and his System. (1892.)

Monograph on Venus. (1893.)

An article in the Observatory, vol.

xv. p. 271.

The monographs on Jupiter and on Venus, although unpretentious, are based upon careful reading of the best authorities, and are written in a way which places them above the ordinary popularisers.

The article above referred to in the Observatory was the outcome of

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her Arabic reading, and showed that there can be little doubt that the variability of Algol had been noticed by the Arabian astronomers.

Note.—The portrait is from a photograph taken not long before death.

MARGARET L. HUGGINS.











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TITLE Agnes Mary Clerke and Ellen Mary Clerke

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